

Jan. 1899.

Greenwich Observations of Occultations etc.

169

Observations of Occultations of Stars and Planets by the Moon and of Phenomena of Jupiter's Satellites made at the Royal Observatory, Greenwich, in the Year 1898.

(Communicated by the Astronomer Royal.)

Day.	Phenomenon.	Telescope.	Power.	Moon's Limb.	Mean Solar Time of Observation.	Observer.
					h m s	
1898. Jan. 3	Disapp. 17 Tauri	28-inch Equat.	300	Dark	7 13 8.5	D.
3	"	Altazimuth	100	"	7 13 8.5	H.
3	"	Sheepshanks Equat.	100	"	7 13 8.5	D. E.
3	"	Astrographic Equat.	225	"	7 13 8.5	W. B.
3	"	Detached Tel. No. 3	100	"	7 13 8.9	W.
3	"	Astrographic Equat.	225	"	7 25 23.4	W. B.
3	"	28-inch Equat.	300	"	7 41 8.2	D.
3	"	Corbett Tel.	100	"	7 41 9.1	H.
3	"	Sheepshanks Equat.	100	"	7 41 9.7	D. E.
3	"	28-inch Equat.	300	"	8 1 26.7	D.
3	"	Morz Tel.	?	"	8 1 (27.9)	C.
3	"	Corbett Tel.	100	"	8 1 26.7	H.
3	"	Sheepshanks Equat.	100	"	8 1 26.8	D. E.
3	"	28-inch Equat.	300	"	8 4 58.8	D.
3	"	Corbett Tel.	100	"	8 4 59.4	H.
3	"	Sheepshanks Equat.	100	"	8 4 59.5	D. E.

Day	Phenomenon.	Telescope.	Power.	Moon's Limb.	Mean Solar Time of Observation.	Observer.
1898.					h m s	
Jan. 3	Disapp. W.B. (2) III. 846	28-inch Equat.	300	Dark	8 5 32.0	D.
3	"	Corbett Tel.	100	"	8 5 33.0	H.
3	"	Sheepshanks Equat.	100	"	8 5 32.7	D. E.
3	" B.D. + 23° No. 523	28-inch Equat.	300	"	8 20 8.5	D.
3	"	Corbett Tel.	100	"	8 20 8.1	H.
3	"	Sheepshanks Equat.	100	"	8 20 8.6	D. E.
3	Reapp. 17 Tauri	28-inch Equat.	300	Bright	8 27 (33.5)	D.
3	"	Merz Tel.	?	"	8 27 (35.6)	C.
3	"	Corbett Tel.	100	"	8 27 32.0	H.
3	"	Sheepshanks Equat.	100	"	8 27 (38.3)	D. E.
3	"	Altazimuth	100	"	8 27 (39.0)	W.
3	Disapp. B.D. + 23° No. 528	Sheepshanks Equat.	100	Dark	8 31 9.5	D. E.
3	" B.D. + 23° No. 531	28-inch Equat.	300	"	8 37 22.7	D.
3	"	Sheepshanks Equat.	100	"	8 37 23.0	D. E.
3	" B.D. + 23° No. 534	28-inch Equat.	300	"	8 39 27.3	D.
3	"	Sheepshanks Equat.	100	"	8 39 28.6	D. E.
3	" 24 Tauri	28-inch Equat.	300	"	8 39 59.3	D.
3	"	Corbett Tel.	100	"	8 40 0.2	H.
3	"	Sheepshanks Equat.	100	"	8 39 59.1	D. E.
3	"	Merz Tel.	?	"	8 40 0.5	E. S.

Jan. 1899.

of Stars by the Moon etc.

Day.	Phenomenon.	Telescope.	Power.	Moon's Lib.	Mean Solar Time of Observation.	Observer.
1898.					<sup>h</sup> <sup>m</sup> <sup>s</sup>	
Jan. 3	Disapp. $\eta$ Tauri	28-inch Equat.	300	Dark	8 45 10.3	D.
3	" "	Merz Tel.	?	"	8 45 11.2	C.
3 (a)	" "	Corbett Tel.	100	"	8 45 10.7	H.
3	" "	Sheepshanks Equat.	100	"	8 45 11.1	D. E.
3	" "	Altazimuth	100	"	8 45 10.9	W.
3	" "	Finder of Thompson Equat.	?	"	8 45 10.2	E. S.
3	" Pi. III. 151	28-inch Equat.	300	"	8 57 21.4	D.
3	" "	Corbett Tel.	100	"	8 57 21.5	H.
3	" "	Sheepshanks Equat.	100	"	8 57 21.9	D. E.
3	Reapp. 23 Tauri	28-inch Equat.	300	Bright	9 11 4.2	D.
3	" "	Corbett Tel.	100	"	9 11 4.1	H.
3	" "	Altazimuth	100	"	9 11 3.8	W.
3	Disapp. B.D. + 23° No. 549	Sheepshanks Equat.	100	Dark	9 25 29.6	D. E.
3	" Bradley 523	28-inch Equat.	300	"	9 38 14.6	D.
3	" "	Corbett Tel.	100	"	9 38 14.8	H.
3	" "	Sheepshanks Equat.	100	"	9 38 14.4	D. E.
3	" 28 Tauri	Corbett Tel.	100	"	9 53 52.2	D.
3	" "	Merz Tel.	?	"	9 53 51.9	C.
3	" "	28-inch Equat.	300	"	9 53 52.4	H.
3	" "	Sheepshanks Equat.	100	"	9 53 52.5	D. E.

0

Day.	Phenomenon.	Telescope.	Power.	Moon's limb.	Mean Solar Time of Observation. h m s	Observer.
Jan. 898	Disapp. 28 Tauri	Altazimuth	100	Dark	9 53 52.8	W.
	" 27 Tauri	Corbett Tel.	100	"	9 59 46.7	E.
	" "	Merz Tel.	?	"	9 59 (47.9)	C.
	" "	28-inch Equat.	300	"	9 59 46.9	H.
	" "	Sheepshanks Equat.	100	"	9 59 47.1	D. E.
	" "	Altazimuth	100	"	9 59 47.1	W.
	" B. D. + 23° No 562	Sheepshanks Equat.	100	"	10 3 19.0	D. E.
	Reapp. η Tauri	28-inch Equat.	300	Bright	10 8 6.9	H.
	Disapp. W. B. (2) III. 903.	Sheepshanks Equat.	100	Dark	10 11 37.7	D. E.
	Reapp. 27 Tauri	Merz Tel.	?	Bright	10 58 52.2	E. S.
Mar. 13 (b)	Disapp. Antares	Sheepshanks Equat.	100	"	14 39 3.8	B.
13	Reapp. Antares	" "	100	Dark	15 49 2.1	"
Apr. 23 (c)	Disapp. 62 Tauri	" "	100	"	9 45 37.2	"
29	" ξ Leonis	Astrographic Equat.	250	"	12 59 23.3	W. B.
May 2	" Pl. XI. 167	Sheepshanks Equat.	100	"	11 23 58.1	A. C.
22 (c)	" Venus 1st Limb	" "	100	"	6 53 54.0	B.
22	" Venus 2nd Limb	28-inch Equat.	450	"	6 54 38.4	L.
22	" "	Astrographic Equat.	225	"	6 54 36.9	H.
22	" "	Sheepshanks Equat.	100	"	6 54 37.5	B.

Day.	Phenomenon.	Telescope.	Power.	Moon's Limb.	Mean Solar Time of Observation.	Observer.
1898.					h m s	
May 22	Disapp. Venus 2nd Limb	Corbett Tel.	70	Dark	6 54 36.9	W. B.
22	Reapp. Venus 1st Limb	Astrographic Equat.	225	Bright	7 31 16.2	H.
22	" Venus 2nd Limb	" "	225	"	7 31 51.3	H.
22	" " "	Sheepshanks Equat.	100	"	7 31 49.8	B.
June 5	" $\lambda$ Sagittarii	Altazimuth	100	Dark	11 22 5.3	S.
Sept. 9	Disapp. Mars 1st Limb	Sheepshanks Equat.	55	Bright	1 30 31.1	A. C.
9 (c)	" Mars 2nd Limb	" "	55	"	1 30 40.1	A. C.
28	" 16 Piscium	" "	55	Dark	13 38 33.5	W. B.
28	" " "	Astrographic Equat.	225	"	13 38 32.8	H. F.
Nov. 22	" 19 Piscium	" "	225	"	7 8 50.6	H. F.
22	" " "	Sheepshanks Equat.	100	"	7 8 50.7	P. M.
29 (d)	Reapp. W. B. (2) V. 1577	" "	100		11 48 59.0	B.
Dec. 23	Disapp. 47 Arietis	Corbett Tel.	100	"	9 3 20.8	H. F.
23	Reapp. " "	Astrographic Equat.	225	Bright	10 11 18.2	S.

Notes.

- (a) Seemed to take 0.2 sec. to disappear. The time noted is that of final disappearance.
- (b) Seemed to encroach on limb before disappearance.
- (c) Not considered a good observation.
- (d) Not considered a good observation. Reappeared very near the bright limb. Cloudy.

Phenomena of Jupiter's Satellites.

Day.	Satellite.	Phenomenon.	Telescope.	Power	Mean Solar Time of Observation. h m s	Mean Solar Time of <i>N.A.</i> h m s	Observer.
1898. Feb. 7	II. (a)	Occ. R. First seen	Altazimuth	100	11 42 45.18	11 40	A. C.
7	II.	Bisection	"	"	11 44 59.81		"
7	II.	Last contact	"	"	11 49 31.07		"
Mar. 2	I. (b)	Ecl. D. Last seen	Sheepshanks Equat.	120	10 44 56.06	10 45 50	B.
2	II. (c)	Tr. Ing. First contact	"	"	10 41 36.61	10 51	"
2	II.	Last contact	"	"	10 48 5.54		"
2	II. (d)	Tr. Egr. First contact	"	"	13 13 11.75	13 19	"
2	II.	Bisection	"	"	13 17 11.10		"
2	II.	Last contact	"	"	13 20 37.53		"
Apr. 16	I.	Tr. Ing. First contact	"	100	13 18 51.39	13 21	A. C.
16	I.	Bisection	"	"	13 20 46.08		"
16	I.	Last contact	"	"	13 22 50.73		"
19	II.	Occ. D. First contact	"	120	8 3 1.65	8 7	B.
19	II.	Bisection	"	"	8 5 21.27		"
19	II.	Last seen	"	"	8 8 20.78		"
May 2	I.	Tr. Ing. First contact	"	"	11 17 57.09	11 20	A. C.
2	I.	Bisection	"	"	11 19 55.76		"
2	I.	Last contact	"	"	11 22 34.33		"
3	I.	Occ. D. First contact	"	"	8 27 8.15	8 29	H.
3	I.	Bisection	"	"	8 28 52.86		"
3	I.	Last seen	"	"	8 30 42.57		"
14	II. (e)	Ecl. R. First seen	"	"	8 55 54.28	8 56 6	A. C.

Jan. 1899.			of Jupiter's Satellites.			175	
Day.	Satellite.	Phenomenon.	Telescope.	Power.	Mean Solar Time of Observation. h m s	Mean Solar Time of N.A. h m s	Observer.
1898. May 14	II.	Full brightness	Sheepshanks Equat.	120	8 57 47.96		A.C.
18	I.	Tr. Ing. First contact	"	"	9 23 27.79	9 24	"
18	I.	Bisection	"	"	9 26 5.35		"
18	I.	Last contact	"	"	9 28 11.02		"
18	I.	Tr. Egr. First contact	"	"	11 36 46.99	11 40	"
18	I.	Bisection	"	"	11 38 39.68		"
18	I.	Last contact	"	"	11 41 4.30		"
June 10	I.	Tr. Ing. First contact	"	"	9 27 50.26	9 27	W.
10	I.	Bisection	"	"	9 29 29.99		"
10	I.	Last contact	"	"	9 31 59.58		"
10	III.	Tr. Ing. First contact	"	"	10 23 1.20	10 23	"
10	III.	Bisection	"	"	10 25 10.84		"
10	III.	Last contact	"	"	10 27 0.54		"
21	III. (f)	Ecl. D. Began to fade	Astrog. Equat.	225	9 39 23.21	9 41 11	C. D.
21	III.	Bisection	"	"	9 41 12.91		"
21	III.	Last seen	"	"	9 46 21.06		"
			Notes.		(d) Probably late.		
			(a) Jupiter unsteady.	(b) Cloudy.	(c) Cloudy, definition very bad.		
			(e) Twilight and slight haze.	(f) Definition poor.			
The initials D., C., L., H., A. C., B., C. D., D. E., W. B., H. F., S., W., P. M., and E. S., are those of Mr. Dyson, Mr. Cowell, Mr. Lewis, Mr. Hollis, Mr. Crommelin, Mr. Bryant, Mr. Davidson, Mr. Edney, Mr. Bowyer, Mr. Thomas, Mr. Stenning, Mr. Withell, Mr. Melotte and Mr. Skells respectively.							

The initials D., C., L., H., A. C., B., C. D., D. E., W. B., H. F., S., W., P. M., and E. S., are those of Mr. Dyson, Mr. Cowell, Mr. Lewis, Mr. Hollis, Mr. Crommelin, Mr. Bryant, Mr. Davidson, Mr. Edney, Mr. Bowyer, Mr. Furner, Mr. Showell, Mr. Witchell, Mr. Melotte, and Mr. Skells respectively.

Royal Observatory, Greenwich: 1899 January 12.